

Serial No. 09/825,128

RD-27,905-2

REMARKS

Applicants appreciate the consideration shown by the Office, as evidenced by the Office Action, mailed on May 19, 2003. In that Office Action, Claims 9 and 11-25 were rejected by the Examiner. Claims 1-8 have been canceled, without prejudice. As such, Claims 9 and 11-25 remain in the case with none of the claims being allowed.

The May 19 Office Action has been carefully considered. After such consideration, Claims 1-8 have been canceled, without prejudice, and Claims 11 and 16 have been amended. Applicants respectfully request reconsideration of the application by the Examiner in light of the above amendments and the following remarks offered in response to the May 19 Office Action.

The Examiner has stated that the application contains Claims 1-8, which are drawn to a non-elected invention. The Examiner has required that the claims be canceled or that other appropriate action be taken. Accordingly, Claims 1-8 have been canceled, without prejudice.

Claims 9 and 11-25 have been rejected under 35 U.S.C. §112, second paragraph. The Examiner states that the expression "immediately" is "inconsistent with the conventional meaning, which excludes [an] additional step between [the] previous step and [the] step that immediately follows the previous step."

Applicants submit that Claim 11 has been amended to recite that the step of heating the die insert to a first temperature further comprises forced-air cooling the rigid die insert immediately after heat treating. Applicants submit that, by including the added limitation to the heat treating step in Claim 11, the meaning of "immediately" in line 10 of Claim 9 is now consistent with the conventional meaning of the expression, as described by the Examiner.

Serial No. 09/825,128

RD-27,905-2

Regarding claims 16 and 21, applicants submit that the term "immediately" is consistent with the conventional meaning of the expression: both claims exclude additional steps between heat treating and quenching.

Applicants therefore submit that the rejection of Claims 9 and 11-25 under 35 U.S.C. §112, second paragraph, is successfully overcome.

Claims 9-15 and 21-25 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Gravemann (U.S. Patent 4,702,299) in view of Blackburn et al. (U.S. Patent 4,820,356). Claims 16-20 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Blackburn et al.

Applicants submit that Claims 9, 16, and 21 each clearly describe the order in which the steps of the claimed method are performed in a manner that is consistent with the conventional meaning of the expression "immediately." Accordingly, Claim 9 recites the limitation of *immediately* quenching the rigid die insert from the first predetermined temperature to room temperature. Claim 16 recites the limitations of *immediately* quenching the rigid die insert from the first predetermined temperature to room temperature and aging the rigid die insert is carried out at a second predetermined temperature that is less than the first predetermined temperature. Claim 21 recites the limitations of *immediately* forced-air cooling the rigid die insert from the first temperature, quenching the rigid die insert in a room temperature bath *immediately* after forced-air cooling, and aging the rigid die insert is carried out at a second predetermined temperature that is less than the first predetermined temperature.

Applicants submit that, in order to establish a *prima facie* case of obviousness, the references must teach or suggest all of the claimed limitations of the present invention. The requisite suggestion or motivation must come from the references themselves, rather than from the Applicants' specification. Obviousness cannot be established by locating references, which describe various aspects of a patent applicant's invention without also

Serial No. 09/825,128

RD-27,905-2

providing evidence of the motivating force, which would impel one skilled in the art to do what the patent applicant has done.

Accordingly, Applicants submit that, as previously presented, the combination of Gravemann and Blackburn et al. do not teach or suggest all of the limitations of amended independent Claims 9 and 21. Specifically, neither reference teaches nor suggests quenching (as recited in Claim 9) or air-cooling *immediately* following heat treating the rigid die insert at the first temperature followed by *immediate* quenching (as recited in Claim 21). Gravemann, as noted by the Examiner, does not disclose treatment of partial metal inserts (4, 5 in Figure 1, for example). Blackburn instead teaches a first heat treatment at a temperature 15-50°F below the gamma-prime solvus temperature (column 2, lines 34-37) followed by the additional step of *controlled* cooling to a second temperature (column 2, lines 41-44), after which the article is rapidly cooled (column 2, lines 51-53).

Applicants therefore submit that, because the combination of references neither teaches nor suggests all of the limitations of amended independent Claims 9 and 21, the rejection of Claims 9-15 and 21-25 under 35 U.S.C. §103(a) as being unpatentable over Gravemann in view of Blackburn et al. is successfully overcome.

Regarding Claims 16-20, Applicants submit that Blackburn et al. alone does not teach or suggest the limitation of *immediately* quenching the Rene 95 superalloy from the first predetermined temperature to room temperature in a bath, recited in amended Claim 16. As presented above, the reference instead teaches a first heat treatment at a temperature 15-50°F below the gamma-prime solvus temperature followed by an additional step of *controlled* cooling to a second temperature, after which the article is rapidly cooled.

Applicants therefore submit that, because Blackburn et al. neither teach nor suggest all of the limitations of amended independent Claim 16, the rejection of Claims


Serial No. 09/825,128

RD-27,905-2

16-20 under 35 U.S.C. §103(a) as being unpatentable over Blackburn et al. is successfully overcome.

In light of the amendment and remarks presented herein, Applicants submit that the case is in condition for immediate allowance and respectfully requests such action. If, however, any issues remain unresolved, the Examiner is invited to telephone the Applicants' counsel at the number provided below.

Respectfully submitted,


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